

IN THE SPECIFICATION

Examiner objects to applicants drawings as failing to comply with 37 CFR 1.84(p)(5), because they include reference signs not mentioned. Therefore, please add the following amendments to the specification.

Please replace paragraph 0022 on page 7 with the following:

Next, as illustrated in Figures 4a and 4b, an organic monolayer 410 is formed on the exposed portion of underlying conductor 210. Figure 4b depicts enlarged portion 415 of Figure 4a to better illustrate organic monolayer 410. Organic monolayer 410 may be used as a protective organic layer for underlying conductor 210 against further processing steps. Examples of further processing steps are discussed in more detail in reference to Figures 6a and 6b. Organic monolayer 410 may be formed with several materials.

Please replace paragraph 0027 on page 9 with the following:

Organic monolayer 410 may be formed on metal conductor 210 by chemisorption of the organic material to the exposed portion of underlying conductor 210 in processing step 405. Chemisorption may be accomplished by exposing the surfaces of ILD 220 and the exposed portion of underlying conductor 210 to the organic material used for organic monolayer 410. In one embodiment, the surfaces of ILD 220 and underlying conductor 210 may be exposed to the organic material used for organic monolayer 410 by the well-known method of dip-coating. In another embodiment, spin-coating may be used. In yet, another embodiment the organic material may be sprayed-on. It is readily apparent, that any deposition method may be used that would expose ILD 220 and underlying conductor 210 to the organic material that adsorbs to underlying conductor 210.

Please replace paragraph 0029 on page 9 with the following:

[0029] After exposing/chemisorption, other processing steps may be completed, while protecting underlying copper layer 410, as seen in Figures 5a-5b. Figure 5b depicts enlarged portion 515 of Figure 5a. For example, the surfaces of ILD 220 may be sealed with layer 510 in processing step 505, so as to line via 325 and trench 320. In one embodiment, layer 510 may be a thin dense film that lines ILD 220 and organic monolayer 410. The thin dense film may comprise SiN, SiO₂, SiC, or other thin film used to seal porous dielectrics. In another embodiment, layer 510 may represent the increased density of the surfaces of ILD 220 after plasma treatment. Plasma gas, such as nitrogen, argon, or helium may be used to seal the surfaces of ILD 220, by increasing the density of the surfaces of ILD 220. Organic monolayer 410 may be designed to protect from the plasma etch. In yet another embodiment, ILD 220 may be sealed by using a silane coupling reagent to fill any pores exposed on the surfaces of ILD 220 as described in pending application 10/627,838 ~~_____~~ (attorney docket number 042390.P14682).

Please replace paragraph 0030 on page 9 with the following:

Turning to Figure 6a and 6b, organic monolayer 410 ~~has been~~ may be removed/desorbed, re-exposing the portion of underlying conductor 210 that was protected by organic monolayer 410, such as in processing step 605. Figure 6b depicts enlarged portion 610 of Figure 6a. Organic monolayer 410 may be removed by thermal processing. Thermal processing may include heating the structure to a temperature, wherein organic monolayer is removed/desorbed, leaving the rest of the structure. Organic monolayer 410 may also be removed by several other treatments, such as oxidation. To remove organic monolayer 410

and not remove underlying metal conductor 210, an oxidant that does not aggressively oxidize the material in underlying conductor 210 should be used; therefore, an oxidant should be used that has a more positive reduction potential than organic monolayer 410, but has a more negative reduction potential than the material in underlying conductor 210. As an illustrative example, formaldehyde may be used as an oxidant to remove/desorb organic layer 410.